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32065546 Family ID: 2065547

<No. of Patents: 12> <No. of Countries: 10>

<No. of Legal Status: 25>

Patent Basic (No,Kind,Date): GB 2331667 A9 -NoDate-

Power cable termination (English)

Patent Assignee: ASEA BROWN BOVERI (SE)

Author (Inventor): LEIJON MATS; SASSE CHRISTIAN

Record Type: Legal Status; Abstract; Cited Refs

Patent Family:

Patent No	Kd Date	Applic No	Kd Date	Wk Added
AU 199921564	A 19990616	AU 199921564	D 19981130	199938
CA 2310010	A1 19990610	CA 2310010	A 19981130	200212
CN 1279829	A 20010110	CN 1998811512	A 19981130	200104
EP 1034589	A1 20000913	EP 1998965722	A 19981130	200037
GB 199725314	D0 19980128	GB 199725314	A 19971128	199807
GB 2331867	A 19990602	GB 199725314	A 19971128	199922
GB 2331867	A9 -NoDate-	GB 199725314	A 19971128	200610 (B)
JP 2001525649	T 20011211	JP 2000523729	T 19981130	200202
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US 6525265	B1 20030225	US 2000554953	A 20000713	200310
WO 1999029005	A1 19990610	WO 1998EP7737	A 19981130	199925
ZA 199810937	A 19990531	ZA 199810937	A 19981130	200038

Priority Data (No,Kind,Date):

GB 199725314	A 19971128
WO 1998EP7737	A 19981130

***** AUSTRALIA (AU) *****

AUSTRALIA (AU) PATENT(S):

Patent (No,Kind,Date): AU 199921564 A 19990616

A high voltage power cable termination (English)

Patent Assignee: ASEA BROWN BOVERI

Author (Inventor): LEIJON MATS; SASSE CHRISTIAN

Priority (No,Kind,Date): GB 199725314 A 19971128; WO 1998EP7737

A 19981130 *

Applic (No,Kind,Date): AU 199921564 D 19981130

ECLA: H01R-004/68

IPC + Level Value Position Status Version Action Source Office

v. 6 main: H02G-015/22

v. 6 : H02G-015/34

v. 8 adv : H01R-0004/68 A I R 20060101 20051008 M EP

v. 8 adv : H02G-0015/22 A I F R 20060101 20051220 M JP

v. 8 adv : H02G-0015/34 A I L R 20060101 20051220 M JP

v. 8 core: H01R-0004/68 C I R 20060101 20051008 M EP

v. 8 core: H02G-0015/00 C I F R 20060101 20051220 M JP

Date of Availability: 19990616 Claims only available

Language of Document: English

Update Week: Backfile (First Week Added: 199938)

***** CANADA (CA) *****

CANADA (CA) PATENT(S):

Patent (No,Kind,Date): CA 2310010 A1 19990610

A HIGH VOLTAGE POWER CABLE TERMINATION (English)
 ELEMENT DE CONNEXION DE CABLE D'ALIMENTATION HAUTE TENSION (French)
 Patent Assignee: ABB AB (SE)
 Author (Inventor): LEIJON MATS (SE); SASSE CHRISTIAN (SE)
 Priority (No,Kind,Date): GB 199725314 A 19971128; WO 1998EP7737
 A 19981130 *
 Applic (No,Kind,Date): CA 2310010 A 19981130
 ECLA: H01R-004/68
 IPC + Level Value Position Status Version Action Source Office
 v. 6 main: H02G-015/22
 v. 6 : H02G-015/34
 v. 8 adv : H01R-0004/68 A I R 20060101 20051008 M EP
 v. 8 adv : H02G-0015/22 A I F R 20060101 20051220 M JP
 v. 8 adv : H02G-0015/34 A I L R 20060101 20051220 M JP
 v. 8 core: H01R-0004/58 C I R 20060101 20051008 M EP
 v. 8 core: H02G-0015/00 C I F R 20060101 20051220 M JP
 Date of Availability: 19990610 Unexamined printed without grant
 Language of Document: English; French
 Update Week: Backfile (First Week Added: 200212)

CANADA (CA) ABSTRACT(S):

CA 2310010 A1 19990610 (English)
 A high voltage power cable termination (1) comprising a current lead (3), a power cable (2) having inner first tube means (5) and outer conducting means, e.g. superconducting means, whose electrically conducting properties improve at low temperatures, arranged around the first tube means and intended in use to be cooled to low temperatures by cryogenic fluid flowing through the first tube means (5), joint means (4) electrically connecting one end of the current lead (3) to the conducting means at one end of the cable at or adjacent one end of the first tube means (5), and second tube means (10) communicating with the first tube means (5) at or adjacent to the joint means (4) for conveying cryogenic fluid to or from the first tube means (5). The first and second tube means (5, 10) are arranged so that, in use, no cryogenic fluid conveyed by the tubes contacts the conducting means or the current lead (3) at the joint means (4). The invention also relates to electrical apparatus, e.g. a high voltage induction device, having such a termination.

CANADA (CA) LEGAL STATUS:

Legal Status (Patent No,Kind,Gazette Date,Code,Text):
 CA 2310010 A1 20000515 CA AFNE (+) NATIONAL PHASE ENTRY
 Last Revised by EPO: 20060512
 Update Week: Backfile
 CA 2310010 A1 20041130 CA FZDE (-) DEAD
 Last Revised by EPO: 20060810
 Update Week: Backfile

***** CHINA (CN) *****

CHINA (CN) PATENT(S):

Patent (No,Kind,Date): CN 1279829 A 20010110
 High voltage power cable termination (English)
 Patent Assignee: ABB AB (SE)
 Author (Inventor): LEIJON M (SE); SASSE C (SE)
 Priority (No,Kind,Date): GB 199725314 A 19971128
 Applic (No,Kind,Date): CN 1998811512 A 19981130
 ECLA: H01R-004/68
 IPC + Level Value Position Status Version Action Source Office
 v. 7 main: H02G-015/22
 v. 7 : H02G-015/34
 v. 8 adv : H01R-0004/68 A I R 20060101 20051008 M EP
 v. 8 adv : H02G-0015/22 A I F R 20060101 20051220 M JP

v. 8 adv : H02G-0015/34 A I L R 20060101 20051220 M JF
 v. 8 core: H01R-0004/58 C I R 20060101 20051008 M EP
 v. 8 core: H02G-0015/00 C I F R 20060101 20051220 M JF
 Date of Availability: 20010110 Unexamined printed without grant
 Language of Document: Chinese
 Update Week: Backfile (First Week Added: 200104)

***** EUROPEAN PATENT OFFICE (EP) *****

EUROPEAN PATENT OFFICE (EP) PATENT(S):

Patent (No,Kind,Date): EP 1034589 A1 20000913
 A HIGH VOLTAGE POWER CABLE TERMINATION (English)
 ELEMENT DE CONNEXION DE CABLE D'ALIMENTATION HAUTE TENSION (French)
 KABELENDVERSCHLUSS FÜR HOCHSPANNUNGSENERGIEKABEL (German)
 Patent Assignee: ABB AB (SE)
 Author (Inventor): LEIJON MATS (SE); SASSE CHRISTIAN (SE)
 Priority (No,Kind,Date): GB 199725314 A 19971128; WO 1998EP7737
 A 19981130 *
 Applic (No,Kind,Date): EP 1998965722 A 19981130
 Designated States:
 C: CH DE DK FI FR GB IT LI NL SE
 ECLA: H01R-004/68
 IPC + Level Value Position Status Version Action Source Office
 v. 7 main: H02G-015/22
 v. 7 : H02G-015/34
 v. 8 adv : H01R-0004/68 A I R 20060101 20051008 M EP
 v. 8 adv : H02G-0015/22 A I F R 20060101 20051220 M JF
 v. 8 adv : H02G-0015/34 A I L R 20060101 20051220 M JF
 v. 8 core: H01R-0004/58 C I R 20060101 20051008 M EP
 v. 8 core: H02G-0015/00 C I F R 20060101 20051220 M JF
 Date of Availability: 20000913 Examined printed without grant
 Language of Document: English; French; German
 Update Week: Backfile (First Week Added: 200037)

EUROPEAN PATENT OFFICE (EP) LEGAL STATUS:

Legal Status (Patent No,Kind,Gazette Date,Code,Text):
 EP 1034589 A1 20000913 EP AK (+) DESIGNATED CONTRACTING STATES:
 (BENANNTE VERTRAGSSTAATEN)
 Designated States: CH DE DK FI FR GB IT LI
 NL SE
 Last Revised by EPO: 20030101
 Update Week: Backfile
 EP 1034589 A1 20000913 EP 17P (+) REQUEST FOR EXAMINATION FILED
 (PRUEFUNGSANTRAG GESTELLT)
 Effective Date: 20000619
 Last Revised by EPO: 20030101
 Update Week: Backfile
 EP 1034589 A1 20020724 EP 17Q (+) FIRST EXAMINATION REPORT
 (ERSTER PRUEFUNGSBESCHIED)
 Effective Date: 20020607
 Last Revised by EPO: 20030101
 Update Week: Backfile
 EP 1034589 A1 20031217 EP 18D (-) DEEMED TO BE WITHDRAWN (ALS
 ZURUECKGENOMMEN GELTEN)
 Effective Date: 20030611
 Last Revised by EPO: 20031224
 Update Week: Backfile

EUROPEAN PATENT OFFICE (EP) CITED REFERENCES:

EP 1034589 A1 20000913 REFERENCES:
 SEA See references of WO 9929005A1

***** GREAT BRITAIN (GB) *****

GREAT BRITAIN (GB) PATENT(S):

Parent (No,Kind,Date): GB 199725314 D0 19980128

A power cable terminator. (English)

Patent Assignee: ASEA BROWN BOVERI

Priority (No,Kind,Date): GB 199725314 A 19971128

Applic (No,Kind,Date): GB 199725314 A 19971128

ECLA: H01R-004/68

IPC + Level Value Position Status Version Action Source Office

v. 8 adv : H01R-0004/68 A I R 20060101 20051008 M EP

v. 8 adv : H02G-0015/22 A I F R 20060101 20051220 M JP

v. 8 adv : H02G-0015/34 A I L R 20060101 20051220 M JP

v. 8 core: H01R-0004/58 C I R 20060101 20051008 M EP

v. 8 core: H02G-0015/00 C I F R 20060101 20051220 M JP

Language of Document: English

Update Week: Backfile (First Week Added: 199807)

Patent (No,Kind,Date): GB 2331867 A 19990602

Power cable termination (English)

Patent Assignee: ASEA BROWN BOVERI (SE)

Author (Inventor): LETJON MATS; SASSE CHRISTIAN

Priority (No,Kind,Date): GB 199725314 A 19971128

Applic (No,Kind,Date): GB 199725314 A 19971128

National Class: H2E EEMC EEMC

ECLA: H01R-004/68

IPC + Level Value Position Status Version Action Source Office

v. 6 main: H01R-004/68

v. 8 adv : H01R-0004/68 A I R 20060101 20051008 M EP

v. 8 adv : H02G-0015/22 A I F R 20060101 20051220 M JP

v. 8 adv : H02G-0015/34 A I L R 20060101 20051220 M JP

v. 8 core: H01R-0004/58 C I R 20060101 20051008 M EP

v. 8 core: H02G-0015/00 C I F R 20060101 20051220 M JP

Date of Availability: 19990602 Unexamined printed without grant

Language of Document: English

Update Week: Backfile (First Week Added: 199922)

Patent (No,Kind,Date): GB 2331867 A9 -NoDate-

Power cable termination (English)

Patent Assignee: ASEA BROWN BOVERI (SE)

Author (Inventor): LETJON MATS; SASSE CHRISTIAN

Priority (No,Kind,Date): GB 199725314 A 19971128

Applic (No,Kind,Date): GB 199725314 A 19971128

National Class: H2E EEMC

ECLA: H01R-004/68

IPC + Level Value Position Status Version Action Source Office

v. 6 main: H01R-004/68

v. 8 adv : H01R-0004/68 A I R 20060101 20051008 M EP

v. 8 adv : H02G-0015/22 A I F R 20060101 20051220 M JP

v. 8 adv : H02G-0015/34 A I L R 20060101 20051220 M JP

v. 8 core: H01R-0004/58 C I R 20060101 20051008 M EP

v. 8 core: H02G-0015/00 C I F R 20060101 20051220 M JP

Language of Document: English

Update Week: Backfile (First Week Added: 200610)

GREAT BRITAIN (GB) ABSTRACT(S):

GB 2331867 A 19990602 (English)

A high voltage power cable termination (1) comprising a current lead (3), a power cable (2) having inner first tube means (5) and outer conducting means, e.g. super-conducting means, whose electrically conducting properties improve at low temperatures, arranged around the first tube means and intended in use to be cooled to low temperatures by cryogenic fluid flowing through the first tube means (5), joint means (4) electrically connecting one end of the current

lead (3) to the conducting means at one end of the cable at or adjacent one end of the first tube means (5), and second tube means (10) communicating with the first tube means (5) at or adjacent to the joint means (4) for conveying cryogenic fluid to or from the first tube means (5). The first and second tube means (5,10) are arranged so that, in use, no cryogenic fluid conveyed by the tubes contacts the conducting means or the current lead (3) at the joint means (4).

GREAT BRITAIN (GB) LEGAL STATUS:

Legal Status (Patent No,Kind,Gazette Date,Code,Text):

GB 2331867 A 20000315 GB WAP (-) APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED ** AFTER PUBLICATION UNDER SECTION 16(1) (APPL. WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED ** AFTER PUB. UNDER SECT. 16(1))
Last Revised by EPO: 20030101
Update Week: Backfile

GREAT BRITAIN (GB) CITED REFERENCES:

GB 2331867 A 19990602 CITED PATENTS:

SEA GB 1117401 A 19680619
SEA WO 1982002617 A1 19820805

***** JAPAN (JP) *****

JAPAN (JP) PATENT(S):

Patent (No,Kind,Date): JP 2001525649 T 20011211
(No title available)
Priority (No,Kind,Date): GB 199725314 A 19971128; WO 1998EP7737 A 19981130 *
Applic (No,Kind,Date): JP 2000523729 T 19981130
ECLA: H01R-004/69
IPC + Level Value Position Status Version Action Source Office
v. 7 main: H02G-015/22
v. 7 : H02G-015/34
v. 8 adv: H01R-0004/69 A I R 20060101 20051008 M EP
v. 8 adv: H02G-0015/22 A I F R 20060101 20051220 M JP
v. 8 adv: H02G-0015/34 A I L R 20060101 20051220 M JP
v. 8 core: H01R-0004/58 C I R 20060101 20051008 M EP
v. 8 core: H02G-0015/00 C I F R 20060101 20051220 M JP
Date of Availability: 20011211 Unexamined printed without grant
Language of Document: Japanese
Update Week: Backfile (First Week Added: 200202)

***** RUSSIA (RU) *****

RUSSIA (RU) PATENT(S):

Patent (No,Kind,Date): RU 2000116638 A 20020810
(No title available)
Priority (No,Kind,Date): GB 199725314 A 19971128
Applic (No,Kind,Date): RU 2000116638 A 19981130
ECLA: H01R-004/69
IPC + Level Value Position Status Version Action Source Office
v. 7 main: H02G-015/22
v. 7 : H02G-015/34
v. 8 adv: H01R-0004/69 A I R 20060101 20051008 M EP
v. 8 adv: H02G-0015/22 A I F R 20060101 20051220 M JP
v. 8 adv: H02G-0015/34 A I L R 20060101 20051220 M JP
v. 8 core: H01R-0004/58 C I R 20060101 20051008 M EP
v. 8 core: H02G-0015/00 C I F R 20060101 20051220 M JP

Date of Availability: 20020810 Unexamined not printed without grant
Language of Document: Russian
Update Week: 200711 (First Week Added: 200710)

***** UNITED STATES OF AMERICA (US) *****
 UNITED STATES OF AMERICA (US) PATENT(S):
 Patent (No,Kind,Date): US 6525265 B1 20030225
 High voltage power cable termination (English)
 Patent Assignee: ASEA BROWN BOVERI (SE)
 Author (Inventor): LEIJON MATS (SE); SASSE CHRISTIAN (SE)
 Priority (No,Kind,Date): GB 199725314 A 19971128; WO 1998EP7737
 A 19981130 *
 Applic (No,Kind,Date): US 2000554953 A 20000713
 National Class: 174 155; X174 156; X1741251; X505886
 RCLA: H01R-004/68
 IPC + Level Value Position Status Version Action Source Office
 v. 7 main: H02G-015/22
 v. 8 adv: H01R-0004/68 A I R 20060101 20051008 M RF
 v. 8 adv: H02G-0015/22 A I F R 20060101 20051220 M JF
 v. 8 adv: H02G-0015/34 A I L R 20060101 20051220 M JF
 v. 8 core: H01R-0004/58 C I R 20060101 20051008 M RF
 v. 8 core: H02G-0015/00 C I F R 20060101 20051220 M JF
 Date of Availability: 20030225 Printed with grant
 Language of Document: English
 Update Week: Backfile (First Week Added: 200310)

UNITED STATES OF AMERICA (US) ABSTRACT(S):
 US 6525265 B1 20030225 (English)
 A high voltage power cable termination with a current lead, a power cable having a first tube and an outer conductor, e.g., a superconductor, whose electrically conducting properties improve at low temperatures, arranged around the first tube and intended in use to be cooled to low temperatures by cryogenic fluid flowing through the first tube, a joint for electrically connecting one end of the current lead to the conductor at one end of the cable at or adjacent to one of the first tube, and a second tube communicating with the first tube at or adjacent to the joint for conveying cryogenic fluid to or from the first tube. The first and the second tube are arranged so that, in use, no cryogenic fluid conveyed by the tubes contacts the conductor or the current lead at the joint. The invention also relates to electrical apparatus, e.g., a high voltage induction device, having such a termination.

UNITED STATES OF AMERICA (US) LEGAL STATUS:
 Legal Status (Patent No,Kind,Gazette Date,Code,Text):
 US 6525265 B1 20021210 US AS ASSIGNMENT
 Assignee(s): ASEA BROWN BOVERI ABS-721 78
 VASTERRAS, (I)
 Effective Date: 20000628
 Last Revised by EPO: 20041223
 Notes: ASSIGNMENT OF ASSIGNORS
 INTEREST;ASSIGNORS:LEIJON, MATS;SASSE,
 CHRISTIAN;REEL/FRAME:013560/0195
 Update Week: Backfile
 US 6525265 B1 20070424 US FP (-) EXPIRED DUE TO FAILURE TO PAY
 MAINTENANCE FEE
 Effective Date: 20070225
 Update Week: 200717

UNITED STATES OF AMERICA (US) CITED REFERENCES:
 US 6525265 B1 20030225 CITED PATENTS:
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- US 6525265 B1 20030225 REFERENCES:
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al; Elektrotehnika, vol. 59, No. 12, pp. 35-40, 1988.

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Parsons; IEEE Journal, vol. 67 .hash.393, Jan. 15, 1929; pp.
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Kraftwerksbau; H. Holz, KSB 1, pp. 13-19, 1960.

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APP US 1781308 A 19301111

APP US 1861182 A 19320531

APP US 1974406 A 19340925

APP US 2006170 A 19350625

APP US 2206856 A 19400702

APP US 2217430 A 19401008

APP US 2241832 A 19410513

APP US 2251291 A 19410805

SEA US 4039740 A 19770802

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**** WORLD INTELLECTUAL PROPERTY ORG PCT (WO) ****
 WORLD INTELLECTUAL PROPERTY ORG PCT (WO) PATENT(S):

Patent (No,Kind,Date): WO 1999029005 A1 19990610
 A HIGH VOLTAGE POWER CABLE TERMINATION (English)
 ELEMENT DE CONNEXION DE CABLE D'ALIMENTATION HAUTE TENSION (French)
 Patent Assignee: ASEA BROWN BOVERI (SE); LEIJON MATS (SE); SASSE
 CHRISTIAN (SE)

Author (Inventor): LEIJON MATS (SE); SASSE CHRISTIAN (SE)

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AP: GI GM KE LS MW SD SZ UG ZW

EA: AM AZ BY KG KZ MD RU TJ TM

EP: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

NA: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE

EE ES FI FI GB GD GE GH GM HR HU ID IL IS JP KE KG KR KZ LC LK LR

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v. 8 adv: H02G-0015/34 A I L R 20060101 20051220 M JP

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WORLD INTELLECTUAL PROPERTY ORG PCT (WO) ABSTRACT(S):

WO 1999029005 A1 19990610 (English)

A high voltage power cable termination (1) comprising a current lead (3), a power cable (2) having inner first tube means (5) and outer conducting means, e.g. superconducting means, whose electrically conducting properties improve at low temperatures, arranged around the first tube means and intended in use to be cooled to low temperatures by cryogenic fluid flowing through the first tube means (5), joint means (4) electrically connecting one end of the current lead (3) to the conducting means at one end of the cable at or adjacent one end of the first tube means (5), and second tube means (10) communicating with the first tube means (5) at or adjacent to the joint means (4) for conveying cryogenic fluid to or from the first tube means (5). The first and second tube means (5, 10) are arranged so that, in use, no cryogenic fluid conveyed by the tubes contacts the conducting means or the current lead (3) at the joint means (4). The invention also relates to electrical apparatus, e.g. a high voltage induction device, having such a termination.

WO 1999029005 A1 19990610 (French)

L'invention concerne un element de connexion (1) de cable d'alimentation haute tension, cet element comprenant un conducteur de courant (3) et un cable d'alimentation (2) presentant des premiers organes tubulaires interieurs (5) et des organes conducteurs exterieurs, par exemple des organes supraconducteurs dont les proprietes de conduction electrique s'ameliorent a basse temperature. Ces organes sont disposes autour des premiers organes tubulaires et concus pour etre refroidis a faible temperature, une fois en marche, au moyen d'un fluide cryogene qui s'ecoule dans les premiers organes tubulaire (5), des organes de raccord (4) permettant de raccorder electriquement une extremite dudit conducteur de courant (3) aux organes conducteurs situes a une extremite dudit cable, lequel est place a une extremite des premiers organes tubulaires (5) ou a proximite de ceux-ci. Des seconds organes tubulaires (10) communiquent avec les premiers organes tubulaires (5), au niveau ou a proximite desdits organes de raccord (4), afin d'acheminer le fluide cryogene vers les premiers organes tubulaires (5) ou a partir de ces derniers. Les premiers et seconds organes tubulaires (5, 10) sont disposes de sorte qu'une fois en marche, aucun fluide cryogene achemine par les tubes ne puisse entrer en contact avec les organes conducteurs ou avec le conducteur de courant (3), au niveau des organes de raccord (4). Cette invention concerne egalement un appareil electrique, par exemple un dispositif a induction haute tension, presentant un tel element de connexion.

WORLD INTELLECTUAL PROPERTY ORG PCT (WO) LEGAL STATUS:

Legal Status (Patent No,Kind,Gazette Date,Code,Text):

WO 1999029005 A1 19990610 WO AK (+) DESIGNATED STATES

Designated States: AL AM AT AU AZ BA BB
BG BR BY CA CH CN CU CZ DE DK DR DK ER EE
ES FI FI GB GD GE GH GM HR HU ID IL IS JP KE
KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN
MW MX NO NZ PL PT RO RU SD SE SG SI SK SL
TJ TM TK TT UA UG US UZ VN YU ZW

Last Revised by EPO: 20030101

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WO 1999029005 A1 19990610 WO AL (+) DESIGNATED COUNTRIES FOR REGIONAL PATENTS

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ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE
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Update Week: 200744

WO 1999029005 A1 20000520 WO ENP ENTRY INTO THE NATIONAL PHASE
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Ref Country: KR
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NATIONAL PHASE
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WO 1999029005 A1 20000713 WO WVE (+) WIPO INFORMATION: ENTRY INTO
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Reference: EP 1998965722 -NoDate-
Update Week: 200821

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Last Revised by EPO: 20030101
Update Week: Backfile

WO 1999029005 A1 20010326 WO WWP (+) WIPO INFORMATION: PUBLISHED IN
NATIONAL OFFICE
Reference: KR 1020007005531 -NoDate-
Update Week: 200744

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IN NATIONAL OFFICE
Reference: EP 1998965722 -NoDate-
Update Week: 200821

WO 1999029005 A1 20031201 WO WWW (-) WIPO INFORMATION: WITHDRAWN
IN NATIONAL OFFICE
Reference: KR 1020007005531 -NoDate-
Update Week: 200744

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***** SOUTH AFRICA (ZA) *****

SOUTH AFRICA (ZA) PATENT(S):

Patent (No,Kind,Date): ZA 199810937 A 19990531

A power cable termination (English)

Patent Assignee: ASEA BROWN BOVERI

Author (Inventor): LEIJON MATS; SASSE CHRISTIAN

Priority (No,Kind,Date): GB 199725314 A 19971128

Applic (No,Kind,Date): ZA 199810937 A 19981130

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концевой муфты в соединительном средстве (4).

15. Концевая муфта по п. 13 или 14, или любому из пп. 15 или 16, при их зависимости от п. 13 или 14, отличающаяся тем, что второе трубчатое средство (10) проходит в обратном направлении от соединительного средства (4) и внутри гирлянды кольцевых соединительных элементов (8) перед тем, как выйдет (в точке 11) из концевой муфты.

19. Концевая муфта по п. 18, отличающаяся тем, что второе трубчатое средство (10) намотано вокруг первого трубчатого средства (3).

20. Концевая муфта по п. 18 или 19, отличающаяся тем, что между вторым трубчатым средством (10) и окружающей гирляндой кольцевых изолирующих элементов (8) расположена тепловая изоляция (12).

21. Концевая муфта по любому из пп. 17-19, отличающаяся тем, что второе трубчатое средство (10) после выхода из концевой муфты окружено тепловой изоляцией (21).

22. Концевая муфта по п. 21, отличающаяся тем, что второе трубчатое средство (10) после выхода из концевой муфты окружено гирляндой кольцевых изолирующих элементов (22).

23. Концевая муфта (30) по любому из пп. 1-16, отличающаяся тем, что первое и второе трубчатые средства содержат каналы (31, 32) подачи и возврата охлаждающего вещества центрального элемента (34), образующего каналы для охлаждающего вещества, силового кабеля (2), вокруг которого спирально намотано проводящее средство в форме ленты или провода.

24. Концевая муфта по п. 23, отличающаяся тем, что центральный элемент, образующий каналы для охлаждающего вещества, разделен внутри для обеспечения указанных подачи и второго трубчатых средств, причем первое и второе трубчатые средства сообщаются друг с другом на указанном одном конце первого трубчатого средства.

25. Концевая муфта по п. 24, отличающаяся тем, что внутреннее разделение центрального элемента, образующего каналы для охлаждающего вещества, обеспечивается диаметральной перегородивающей стенкой.

26. Концевая муфта по п. 24, отличающаяся тем, что элемент, образующий каналы, или внутренняя перегородивающая стенка спирально закручена.

27. Концевая муфта по п. 23, отличающаяся тем, что центральный элемент, образующий каналы для охлаждающего вещества, выполнен в виде единственной трубки (34) с возвратной изогнутой частью (33) в соединительном средстве (36), соединяющей указанные первое и второе трубчатые средства (31, 32), которые предназначены для транспортировки хладагентной течи из среды с противоположных направлений внутри силового кабеля (2).

28. Силовой кабель, снабженный концевой муфтой по любому из предыдущих пп. 1-27.

29. Электронное устройство высокого напряжения, имеющее концевую муфту по любому из пп. 1-27.